

Improving revision

A THEORY OF CREEPING UNEMPLOYMENT AND LABOR FORCE DISPLACEMENT

By Clarence D. Long*

1. Introduction

The theory of unemployment has, until recently, been pretty much the theory of demand. The demand theory, however, fails to explain why unemployment persists, even grows, in the face of increases in aggregate spending. From 1947-48 to 1955-56 -- both periods of prosperity -- gross national expenditure rose 65 percent, full-capacity gross national product less than 40 percent; from 1955-56 to 1959 -- also a prosperity year -- expenditure rose 18 percent, full capacity product 9 percent.¹ Excess demand in each case was

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1. Historical Statistics of the United States, p. 143; Statistical Abstract of the United States, 1960, p. 305. Full-capacity product was computed by dividing the actual gross physical product by the ratio of employment to labor force.

Between 1947 and 1960 were only three years in which gross national expenditure failed to rise more than full capacity gross physical product. These were the recessions of 1948-49, 1953-54 and 1957-58, when expenditure fell slightly, or trailed physical capacity by a small percentage. In the recession of 1959-60 the rise of gross national expenditure actually exceeded the rise of physical capacity by 1.6 percent.

It may be argued that the true rise of physical capacity was greater than the above figures indicate, because the figures take inadequate account of improvements in quality of commodities and services and because the price indexes have been biased upward owing to weighting and other difficulties. If the true rise in physical capacity was larger than the measures indicate, it is possible that aggregate spending could have been stepped up somewhat in order to reduce unemployment, without inducing inflation. Much interest has arisen recently over this question of understatement of production increases and overstatement of price increases, but to my knowledge nobody has been able even to approximate the amount of the misstatement. For a discussion, see "Government Price Statistics," Hearings before the Subcommittee on Economic Statistics of the Joint Economic Committee, May 1-5, 1961. See also Irma Adelman and Zvi Griliches, "On an Index of Quality Change," Journal of the American Statistical Association, September 1961, pp. 535-48.

absorbed by a price rise, while peacetime prosperity unemployment crept upward.² Four recessions have occurred since 1947, in which unemployment hit moderate peaks. The peaks have been so brief, however, that only a sixth of the average peacetime idleness since 1947 has been directly traceable to the business cycle; five-sixths of it has been the kind that prevails during the good years. The recent problem of unemployment has been one not of sharp rise in recession, but of upward creep in prosperity.³

2. In the United States the labor force is currently defined as the sum of all persons reported by the census to be employed or unemployed during a certain specified week, the week which includes the 15th of the month to which the measure refers. The employed category covers all persons 14 and older who have jobs or businesses for pay or profit, including employers and self-employed, unpaid family workers in a store or on a farm who help produce a saleable product or service, and employees of non-profit enterprises and government agencies. The unemployed include persons 14 and older who have no job or business and are seeking such employment during the survey week (or who say they would have sought it had they not been sick or had they not believed that there was no work to be found).
3. Objection has been made that the apparent creep could be a return to some pre-World War II "normal." For light on this, we examine the various prosperity years since 1900 (excluding both the three war periods, when aggregate demand was inflated, and the great depression decade of the 1930's, when demand was chronically deflated). For these prosperity periods, unemployment averaged 3.4 percent. The 1947-48 level, of 3.85 percent, was already above normal, the 1955-56 rate, of 4-1/4 percent, above all except four of the prosperity years, and the 1959 rate, of 5-1/3 percent, above any except 1910. (Stanley Lebergott, "Annual Estimates of Unemployment in the United States, 1900-1950," The Measurement and Behavior of Unemployment (Princeton University Press, 1957), pp. 215-16.) The entire war periods were excluded, counting the war in Europe. Prosperity years were identified in two ways. One relied on Willard Thorp's Business Annals (New York: National Bureau of Economic Research, 1926), pp. 138-45, supplemented by the reference dates of A. F. Burns and W. C. Mitchell, Measuring Business Cycles (New York: National Bureau of Economic Research, 1946), p. 78. The other used all peacetime years between 1900 and 1929 not referred to in Measuring Business Cycles as trough years in either calendar-year or fiscal-year chronologies.

Our recent measures are possibly more accurate and complete than those of earlier postwar years; though at least one expansion of concept -- to include several hundred thousand temporary layoffs formerly counted as employed -- has been taken account of in our series since 1947. (Clarence D. Long, The Labor Force under Changing Income and Employment, Princeton University Press, 1958, p. 322, note c. For full discussion of the

Hand in hand with this upward creep have gone a lengthening in the duration of unemployment, an increase in the relative burden on the colored, and more rapidly increasing unemployment in blue-collar and manual, than in white collar and service occupations. In addition, the labor force has continued its long-term changes in age and sex composition. Half or more of the increase during the past decade was made up of women between their mid-30's and their mid-60's; the proportion of females increased from less than 29 percent of the total in 1950 to nearly 32 percent in 1960, while the proportion of males decreased accordingly, especially among older men and youths.⁴

These trends raise two questions:

What could have caused this creeping unemployment?

What could have caused the relative displacement of men from the labor force and their replacement by women?

comparability of labor force concept and measurement technique over time, see Chapter 3 and Appendices E and F.) See also Current Population Reports "Concepts and Methods Used in the Current Employment and Unemployment Statistics Prepared by the Bureau of the Census." Series P-23, No. 5, May 9, 1958, pp. 14. Improvements in measurement since 1940 could have resulted in more comprehensive measures than the crude interpolations of the 1920's and earlier. Finally, the successive rises of unemployment at each of the last three peacetime prosperity periods could have been accidental. No earlier sequence of several increases occurred, but a string of four decreases did take place between 1910 and 1926.

On this question of proof of creeping unemployment, we must thus wait for more evidence. The next boom might interrupt the sequence. (Indeed, it is possible that the sequence was broken in the 1950's. The short, peacetime prosperity from the end of the Korean War in July 1953, to the end of 1953, is not counted here because of the possibility that the Census was under-reporting unemployment during a changeover in the sample.) Whether an interruption would weaken the case for creeping unemployment would depend on its cause: If inflationary spending, creeping unemployment would be only temporarily offset; we concede that demand inflation can offset creeping unemployment, just as demand deflation can add to it.

4. C. D. Long, "Prosperity Unemployment and its Relation to Economic Growth and Inflation," American Economic Review, May 1960, pp. 157-160; "Labor Force and Unemployment in the 1960's," Proceedings of the Second 1961 Economic Institute, Chamber of Commerce of the United States, Washington, D.C., May 17, 1961, pp. 6-7.

2. A Model to Explain Creeping Unemployment and Labor Force Displacement

In order to answer these questions, an attempt is made to develop and support a theory of creeping unemployment and labor force displacement. The theory relies on two postulates, each serving as a blade of a scissors:

First, what we call a widening productivity spread; second, a constant wage spread.

Recent decades have opened up unprecedented opportunities to enhance personal productivity: wholesome food, sanitation, and medical care have improved physical well-being; lowered barriers to movement and jobs have brought forth full productive power; and better education has built a vast stairway of economic and social opportunity.

It is our argument that the higher the average quality of labor force, the less favorable the position of those who cannot improve. Some persons lack the intelligence, willpower, motivation, or emotional stability; others are barred by age, color, or inferior schools. These disadvantaged individuals fall behind and, as the average increases, so does their inferiority. It is worse to have no education when the average worker is a high school graduate, as in 1960, than when he has only elementary schooling, as in 1930. Under mass-production, work pace and job arrangements tend to be geared to the majority. Under any arrangement, substandard workers may not be worth hiring if a minimum wage compels the employer to pay more than is justified by their individual productivity.

Thus, our second postulate is a social minimum wage below which workers are not employed -- because of laws, unions, customs, firm policies, social insurance, welfare, and pensions and other private assets.

The model does not assume that the social minimum advances faster than the average wage (this would accentuate creeping unemployment); only that it

marches at the same rate as the average wage, and this in turn at the same rate as average productivity. Outpacing the productivity of the stragglers, the advance of the social minimum makes their hire unprofitable, disemploying them or squeezing them out of the labor force. Whether the labor force shrinks, or remains the same proportion of working-age population, depends on whether the stragglers are replaced by persons outside the labor force, whose productivity exceeds the social minimum and who for various reasons seek to enter.

A subsidiary proposition is that total spending of the economy is enough to buy all its products at constant prices and grows at the same rate as the full capacity physical product. If it grows more slowly, this furnishes an additional cause of unemployment; if more rapidly, an offset.

The model is illustrated in Chart 1, section A, where labor force segments advance in productivity at lower compound annual rates the lower the productivity level: the lowest at, say 1 percent, the next at, say $1\frac{1}{4}$ percent, and so on. Average productivity is the weighted mean for the segments, and is assumed to move ahead at the same rate as the average wage; thus, the same line is used to represent both. The social minimum, though well below these averages, is assumed to proceed at the same rate.⁵ An expansion of demand just fast enough to buy the expanding output at constant prices is reflected in the advance of money wages at the same rate as real wages.

Given these assumptions -- a widening dispersion of productivities,

5. A few students maintain that an absolute rather than a percentage differential is more meaningful. If the social minimum wage were to remain below the average wage by a constant absolute differential, it would rise much more rapidly than it does in this theory and therefore have much greater effect in causing creeping unemployment.

and a constant ratio of the social minimum to the average wage and average productivity -- the disadvantaged segments become ever less employable.⁶

Result: creeping unemployment and labor force displacement.

3. Is there a Widening Productivity Spread?

The usual productivity statistics rest on aggregate output and cannot measure individual output. The individual's output, even if measurable, would depend on how effectively his capacity is utilized. Great potential goes unrealized where incentive and opportunity are lacking to translate it into performance. Two kinds of performance, however, may be meaningful and measurable enough to throw light on individual productive capacity. One is education, the other intelligence scores.

Educational attainment has been shown to be closely related to unemployment and labor force participation.⁷ That unemployment rates vary

6. Our assumption that the lower productivity segments of the labor force invariably lag in productivity advance is made for simplicity and is not necessary to the argument. In actual fact, for a time some of the higher-productivity members of the work force may lag in productivity and some of the lower-productivity members accelerate. This would narrow the productivity spread until the two rates of advance crossed each other; thereafter the effect would be a widening of the spread.

7. The strategic factor is not necessarily education as such, but the things it stands for: intelligence, drive, emotional stability, family affluence, economic opportunity, and other factors. Certainly, there has been close moment-of-time association between education and incomes. In 1939 and 1949, incomes of white males of a given age, say 35-44, were higher for each higher educational level; so also for colored males. In 1958, the pattern was upheld for both races combined. Incomes were much lower for colored than for white men of the same education and age, though the quality levels of colored education were doubtless also lower. For whites or colored, educational differences have been far more important to income than have age differences.

Income and education have also moved together over time. Men of a given age group, say 45-54, had larger income increases from 1949 to 1958 for each higher educational attainment: ranging from 26 percent for less than eighth grade to 66 percent for college graduates or better. (Arnold Katz,

inversely with schooling at any moment has been upheld by each of the 1940 and 1950 censuses, and, more recently, by the 1959 sample survey. The relationship persists for persons classified separately by age, color, and sex.

(Chart 2.) Similarly with labor force participation: nearly half the adult men with no schooling are either unemployed or out of the labor force, and the proportion falls with each addition of schooling: rapidly through the eighth grade, slowly through high school and college, until for college graduates the proportion outside the labor force tends to be only a few percent.

Equally impressive had been the way the unemployed and the labor force outsiders have trailed the employed in education over time. In 1950, males 18 and older unemployed averaged 91.8 percent of the average schooling of the employed, and the not-in-labor-force 92.8; by 1959 these percentages had fallen to 81 percent and 73 percent (Chart 3, Section A). Developments have been similar for the various age groups. Furthermore, the proportion employed has fallen most for persons of little schooling and fallen least, even risen, for those with much. Between October 1952 and March 1959, men 18 and older completing less than the fifth grade suffered a drop in employment rate of 14.5 percent of all civilian males of that educational attainment; each higher-educated group experienced a smaller drop; and those with some college training experienced a decline of only 4 percent, while college graduates or better actually increased their employment rates by 2 percent (Chart 3, Section B).

The above comparisons have been confined to males, because for females

Educational Attainment of Workers, 1959, Special Labor Force Reports No. 1, Monthly Labor Review, February 1960, Reprint No. 2333, p. 115.) Schultz estimates that of the rise in real earned income per worker from 1929 to 1957 at least half, although it could be substantially more than this, was due to additional education. (Theodore W. Schultz, Education and Economic Growth, University of Chicago, Economics of Education Research Paper No. 6002, April 20, 1960 (mimeographed), pp. 53-54.)

the relationship is more complex. On the one hand, given the same age, color, child-care responsibilities, and education, wives are less likely to be in the labor force the higher the incomes of their husbands. On the other hand, wives of higher income husbands tend to have better education and therefore better job chances. Effects of income and education partially cancel. Unemployed women or women not in the labor force average less education than the employed women. But the margin of inferiority -- 10 to 15 percent -- is not as great as in the case of the males.

An interesting result emerges if changes in female employment are compared by educational level. Only female high school graduates or better enjoyed a rise in employment rate between 1952 and 1959; the more education the greater the rise (Chart 3, Section B). Women 18 and older with less than 5 years schooling suffered an 8 percent drop in employment. Thus well-educated men increased their employment percentages, against the general downward trend for males; poorly-educated women decreased theirs, against the general upward trend for females. The downward trend of males and the upward trend of females are matters not merely of sex but of education.

Have the poorly-educated moved ahead less rapidly in average schooling than the population -- supporting the idea of a widening productivity spread?

One approach -- to examine whether the average schooling of the lowest 5 or 10 percent has advanced more slowly than the median education of the labor force -- is not feasible, because the educational attainment groupings as reported by the census are so broad that a considerable shift could have taken place within each group.

A second approach -- to compare the education of various age-sex groups -- reveals that the spread between the poorest- and best-educated age groups, which had stayed relatively constant at about 10 percent during 1900-

1930, widened sharply to about 20 percent in 1940 -- as the schooling of young people accelerated and that of older men lagged -- and continued to widen to nearly 40 percent in 1950 (Chart 3, Section C). The lag continued in 1960 for men 55-64 and 65 and older, but was reversed for men 35-54, as the passage of time aged those in the earlier generation who enjoyed an improvement of schooling. By 1970, the spread will have narrowed further, from the aging of the better-educated of several decades earlier, and by 1980 it will have narrowed still more; though for men 65 and older the educational deficiency will be greater than in 1940 and not less than at present.⁸ We therefore get an impression that the spread has widened in the last two decades, but will not continue to widen in the future for most of the age groups.

These age groups do not reveal, however, whether the lowest educational attainment groups within each age group may not fall even further behind. The Census has commented: "By now the rate [of illiteracy] for native whites probably has almost reached its minimum point; most of the illiterate native whites today are probably physically or mentally incapable of learning to read or write."⁹ Just above these uneducable, is there another 5 or 10 percent whose intellectual capacities are limited and whose accomplishments, while capable of increase, develop more slowly than the average?

Psychologists have not yet succeeded in measuring intellect, apart from overt action. Defined by Wechsler as the global capacity of the individual to act purposefully, think rationally, and deal effectively with his

8. For the two decades ahead, we can safely project the educational attainment of all the older age groups, since most of these people have completed school and will simply be a decade or two older.

9. Current Population Reports, Population Characteristics, Literacy and Educational Attainment, February 4, 1960, Series P-20, No. 99, p. 2.

environment, it has been described by him as like electrical energy; known by the things it does.¹⁰

A complication in measuring capacity is that people vary tremendously in what they can do. However, a close association has been found between occupational levels and general intellectual capacity, measured by verbal scores. Miner has ranked various occupations along a single dimension of verbal ability, since each job has a lower limit of such ability.¹¹ Thorndike notes that most jobs, especially at upper levels, require multiple abilities; if many abilities are required, the number able to do the job will be much smaller than if only a single ability is needed.¹² Two Scottish investigators found that four-fifths of the men holding directive and executive positions were in the first quartile of test scores; nearly half the unskilled were in the lowest quartile.¹³ High scorers on intelligence tests have been observed by Vernon usually to show other desirable characteristics, including superior health and "moral qualities."¹⁴ Compared with employed office clerks of the same ages, Morton found that unemployed clerks had lower intelligence and

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10. David Wechsler, The Measurement and Appraisal of Adult Intelligence, 4th ed., Baltimore, Williams and Wilkins Co., 1958, pp. 7-8.
 11. John B. Miner, Intelligence in the United States, Springer Publishing Co., Inc., New York, 1957, pp. 41, 144-48, 165-69.
 12. R. L. Thorndike, "A Look Ahead." Proceedings, 1951 Invitational Conference on Testing Problems, Princeton, New Jersey, Educational Testing Service, 1952, pp. 34-38.
 13. G. A. Foulds and J. C. Raven, "Intellectual Ability and Occupational Grade," Occupational Psychology, October 1948, Vol. 22, No. 4, pp. 197-203. Two simple psychological tests were applied to 920 employees of a photographic manufacturer.
 14. P. E. Vernon, "Psychological Studies in the Mental Quality of the Population," The British Journal of Educational Psychology, February 1950, Vol. XX, Part 1, pp. 35-42.

clerical scores and were emotionally less stable.¹⁵

All in all, mental capacity as reflected by test scores seems associated with occupational level and employment status. But how wide are the capacity differences?

The most intensive student has been Wechsler, who collected results of many investigations, rejecting the 1/10 of 1 percent at either extreme as pathological or abnormal "by other criteria." His ratios of extremes of ability revealed "strikingly recurrent" values: 1.2 to 1 to 1.4 to 1 for linear traits; 1.65 to 1 to 2.5 to 1 for motor functions; and 2.30 to 1 to 2.85 to 1 for perceptual and intellectual capacities.¹⁶ The range of human capacities is surprisingly small, though everyday performances may range more widely, because of differences in effort.

Now the central question. Granted capacity is associated with occupational level and employment status, and that differences are substantial, even if not extreme; has it been growing for the average, while lagging for the "inferior," person?

Few studies can be used to answer this question, because the group tested and the type of test may be strongly biased. A distribution for "Ivy League" students will be cut off at the lower end, because most persons of inferior intelligence fail to get in; one for penitentiary inmates will be cut off at the upper end, because most persons of superior intelligence manage to stay out. A fair test requires a representative cross-section of population, and should be repeated after a long enough elapsed time to allow average

15. N. W. Morton, Occupational Abilities, A Study of Unemployed Men, Oxford University Press, Toronto, 1935, pp. 133, 186. The inferiority was not great, however, and Morton conceded that it might be due to sampling.

16. David Wechsler, The Range of Human Capacities, Baltimore, The Williams and Wilkins Company, 1952, pp. 3, 45-49.

intelligence to change significantly.

Only two such studies could be found: One of Scottish school children, the other of American soldiers.

The Scottish Mental Survey applied two tests to the complete group of Scottish eleven-year-olds, including such mentally and physically deficient children as could reasonably be expected to attempt the test. (Table 1.) It gave the first test to all pupils born in 1921 and at school on June 1, 1932; the second to all born in 1936 and at school on June 4, 1947.

Following are frequency distributions for 1932 and 1947 of those children in each group classified by verbal score.

TABLE 1. DISTRIBUTION OF VERBAL SCORES OF 11 YEAR-OLD CHILDREN IN THE TWO SCOTTISH SURVEYS OF 1932 and 1947

Girls and Boys			
Verbal Scores	1932	1947	Change
70-76	0.2	0.3	+ 0.1
60-69	3.6	5.7	+ 2.1
50-59	13.3	16.9	+ 3.6
40-49	23.3	24.8	+ 1.5
30-39	23.9	21.6	- 2.3
20-29	17.0	14.2	- 2.8
10-19	11.5	9.3	- 2.2
0- 9	7.2	7.2	0
Total Percent	100.0	100.0	
Total Number	87,498	70,805	
Median Score	35.5	38.4	+ 2.9
Mean Score	34.5	36.7	+ 2.2

Source: The Population Investigation Committee and the Scottish Council for Research in Education, The Trend of Scottish Intelligence (University of London Press, London, 1949), pp. 82-85.

The median score moved up by 2.9, a surprise to those investigators who expected a fall on the ground that people of low intelligence have larger families and therefore multiply faster. The improvement of the average despite a dysgenic effect, was attributed to education having brought out capacity formerly unrealized.

Our own study is concerned with the distribution -- especially the bottom part. In face of the upward shift in scores, reflected in more brighter children and fewer dullards, the bottom-scoring group remained the same size -- 7.2 percent -- in accordance with our hypothesis that the lowest portion of the work force may lag in capacity. Moreover, a much larger proportion within the 0.9 group scored as zero or defective in 1947 than in 1932.¹⁷

The second survey throws clearer light on the possible lag in capacity of the bottom groups.¹⁸

In World War I, the Army tested inductees with an "Alpha" Test. In World War II, it used a General Classification Test, which was not comparable; to get comparability, Tuddenham applied the World War I Army Alpha Test to a sample of white enlisted World War II inductees. As Tuddenham points out, the armed forces constitute by far the largest and most representative sample of the general population ever subjected to psychometric procedures.

Tuddenham's study has the advantage of reporting raw scores by percentiles, not subject to immeasurable shifts within broad groups. The rise

17. Op. cit., p. 81. The report suggested that the 1947 survey may have dredged more deeply into the lower levels of intelligence.

18. Read Tuddenham, "Soldier Intelligence in World Wars I and II," The American Psychologist, February 1948, p. 55. The Tuddenham sample was small -- only 768 men -- but it had almost exactly the same distribution of army standard scores as all inductees entering in 1943. The actual test was the Wells Alpha, which yielded higher raw scores than the original, but Tuddenham concluded that the difference was trifling.

for the median was 67 percent, fairly representative for the 15th to 55th percentiles (Chart 1, Section B). Tuddenham believes the increase in average score reflected better education, and that innate capacity had possibly not improved, even declined. Below the 15th percentile, each lower score went up less, and for the bottom percentile the score actually fell, consistently with the hypothesis of a widening productivity spread.

What can we conclude from these studies?

First, that a person's education and verbal intelligence scores help predict his ability to get a job and the kind of job he is able to get.

Second, that there has been a great lag in education of older people.

Third, that there may have been a lag in the capacity of the least intelligent. Such a lag has not been firmly established; our measures may not reflect true capacity, and the lag we find may be due to lack of guidance and opportunity, rather than innate ability. But these studies awaken our concern and suggest a fertile wilderness for exploration into the causes of structural unemployment.

4. The Social Minimum Wage and Its Statistical Underpinning

The social minimum can be regarded as a rate below which workers will not take jobs or employers hire. Neither precise nor uniform for all types of persons, jobs, or areas, it rests on variable and in some case intangible legal, economic, and social conditions.

Minimum Wage Laws. The Fair Labor Standards Act forbids employment at less than a flat minimum in industries affecting interstate commerce -- manufacturing, construction and mining. The percentage the minimum has been of the average wage depends on the years compared. Touching a temporary peak in the year the dollar minimum is raised, the percentage declines as the dollar

minimum stays where it is while the average wage rises. The minimum averaged 33.2 percent of the average in manufacturing during 1945-49, 44.4 percent during 1950-55, and 46.8 percent during 1956-60; and the percentage rose even if fringe benefits are added to average hourly earnings. The Act is supplemented by the Walsh-Healey and Davis-Bacon Acts, which require Federal contractors to pay the prevailing wage of their industry and locality. Administered rather liberally by the Secretary of Labor, the last two usually result in stipulated minimums of 25 or 35 percent above the flat statutory amount.

The federal laws exclude really low-wage employments such as agriculture, domestic service, and retail trade and service. For the last two, they are supplemented by state minimums, which, outside of a few Northeastern states, are too low to have an economic impact. All legal minimums together cover about two-fifths of the work force -- the portion, in general, of highest average wages and most unemployment.

Social Insurance and Welfare. Under the federal-state employment insurance system, the unemployed get weekly benefits out of a fund accumulated from payroll taxes. About three-fifths of the wage and salary work force is covered. Excluded are the lowest-wage earners, heavily concentrated in agriculture, domestic service, and tiny firms. Excluded also are many who have not been employed long enough to qualify, or have exhausted claims. Average weekly benefits in 1959 were about \$30, or 75 cents an hour for a 40-hour week.¹⁹ The average beneficiary receives less than the Fair Labor Standards minimum wage, and the below average beneficiary still less. But unemployment insurance is a more solid foundation for the social minimum than a statutory minimum wage. It provides an actual income alternative; benefits are free of state

19. 1960 Supplement to Economic Indicators, Joint Committee Print, 86th Congress, Second Session, p. 36.

and federal income and social security taxes, costs of lunches, work clothes, and carfare; the recipient is spared any disutility of effort, and can save by doing home chores. Even beneficiaries unemployed 16 weeks have been reported by Joseph Becker to maintain a level of expenditure close to usual.²⁰ The average benefit check was 36.3 percent of net spendable average weekly earnings of factory workers in 1946-48, 36.6 percent in 1955-57, 37.8 percent in 1959.²¹

Old age insurance benefits are less than those of unemployment -- the average going to an aged couple is equivalent to about 64 cents an hour for a person working a 40-hour week. On the other hand, they share the advantages of being free of taxes, effort, and costs of working, and they go beyond in being available to nearly the whole older labor force and their dependents and survivors (although for many older workers, coverage has been too recent to qualify them for much benefit); they are relatively generous for the lower-wage earner; and they continue until death of the earner, and thereafter for his survivors. Older persons have low living expenses, if health is good; if health is so bad that they are not employable, they fall outside the scope of this paper. The average benefit of a retired couple was less than 20 percent of monthly net spendable earnings of a factory worker during 1946-48, but amendments in 1950, 1952, and 1954 raised it to 33.5 percent during 1956-57, while the number of beneficiaries rose six-fold, to nearly fourteen million by

20. Joseph M. Becker, S.J., "The Adequacy of the Benefit Amount in Unemployment Insurance," (The W. E. Upjohn Institute for Employment Research, May 1961, p. 49). The average reduction in total expenditure of all beneficiary types was only about 5 percent.

21. 1960 Supplement to Economic Indicators, p. 36. Statistical Abstract of the United States, 1955, p. 211, 1960, p. 223.

1959.²² Benefits instituted in 1960 were still more generous.

Welfare benefits also support the social minimum, though less directly. Paid to the crippled, blind, dependent children, and others typically unemployable or outside the labor supply,²³ the average benefit in 1959 ranged from \$65 a month for the old or disabled, to \$110 for a family which had two dependent children -- the equivalent of 40 to 65 cents an hour for a person working a 40-hour week.²⁴ These benefits are modest, but, like insurance benefits, are free of taxes and working costs. Were it not for this aid, some of the recipients would doubtless work. More important the aid relieves many able-bodied recipients of having to support dependent parents and children and thus indirectly of having to work. Altogether, outlays per member of the labor force for social welfare -- including social insurance, public assistance to the old, the crippled, the blind and dependent children, workmen's compensation, and health and medical programs, but excluding education and housing -- rose 105 percent between 1948 and 1958, compared with the 44 percent rise of net spendable earnings of an average factory hand.²⁵

Employers' Minimums. Firms, especially larger ones, may set a wage below which they do not hire for reasons of humanitarianism, enhancing morale, heading off unionization, or attracting better people (the motive behind Henry

22. Statistical Abstract of the United States, 1955, pp. 211, 251; 1956, p. 262; 1960, pp. 223-271.

23. The town of Newburgh, New York, in attempting to purge its welfare rolls by forcing able-bodied recipients to work, could find only a few who were able-bodied.

24. Historical Statistics of the United States, p. 200; Statistical Abstract of the United States, 1961, p. 284.

25. Historical Statistics of the United States, p. 194; Statistical Abstract of the United States, 1961, p. 260.

Ford's famous minimum before World War I). Periodically, some firms give automatic hikes, gradually raising the pay of many older employees above their qualifications.

Union Minimums. Wage floors set by collective bargaining are usually above those erected by law or employers' own volition. Among those manufacturing industries that were strongly unionized, the lowest wages varied up to \$1.40 per hour. In the unionized printing, building, truck driving, or local transit crafts, the lowest wage varied at any one time from \$1.50 to \$1.65 per hour. As a percentage of average hourly earnings in these four trades, the effective minimum increased from 1950 to 1958 in three out of the four cases.²⁶

Family Resources. Assets acquired by personal savings or inheritance, even an owner-occupied home, relieve pressure to work. The more prosperous the society, the greater these assets. Unfortunately there are no statistics on private assets of the unemployed, or on the relationship of these assets to normal earnings. Benefit payments out of private pensions and deferred profit-sharing plans rose from \$220,000,000 in 1945 to \$1,150,000,000 in 1957; but how much are available to the unemployed is not known.

Also taking pressure off the worker are earnings of other family members. Incomes of wives have enabled younger and older workers to be more choosy of a job or to stay in school or retirement. However, effects of their

26. The minimum rose from 44 to 50 percent in the case of printing trades; from 61 to 66 percent in the case of motor truck drivers and helpers; from 61 to 63 percent in the case of the building trades. The percentage fell from 80 to 75 percent in the case of local transit workers. Bureau of Labor Statistics, Handbook of Labor Statistics, 1947 edition, Bulletin 916, p. 90; 1954, Bulletin No. 1179, p. 14; May 1958, Bulletin 1252, p. 20. Bulletins 1011, p. 7; 1012, p. 4; 1018, p. 7; 1019, pp. 2-3; 1244, p. 5; 1245, p. 12; 1246, p. 7; 1247, p. 13. In the case of local transit, motor truck drivers and helpers, and printing trades, the wage chosen for minimum allowed for 1 percent of the workers receiving less; in the case of building helpers and laborers, 4 percent received less than the minimum.

earnings may have been diluted by the splitting off of many secondary workers into separate dwelling units, where it costs more to live.

The more credit available, the less the immediate compulsion to work, except that not much credit is available to the poor and unemployed, and that installment debt incurred while employed may compel the unemployed to take jobs they do not like to avoid losing houses, appliances, and cars.

Finally, the higher the usual plan of living, the greater the physical possibility of cutting out luxuries and therefore the less compulsion to take a job. For the very poor, food and shelter take so much of the budget that workers may be forced to accept poor-paying jobs in order to live.²⁷ Yet modes of living are difficult to change, and, psychologically, the higher the living standard the greater compulsion to work.

Not only has the social minimum wage changed over time; it has varied among different groups. It is surely lower for women than for men, for colored than for white, for rural than for urban workers, for older than for middle-aged. And these various minimums have probably changed over time at different rates.

The lower pay of women does not require extensive documentation.²⁸ Weekly earnings range from 35 to 40 percent less than those of males in manufacturing industries; full-time year-round earnings in all industries range

27. "Mexicans have been imported under contract for the last decade to insure a stable labor force throughout Arkansas' delta land....Americans willing to do this stoop labor for 30 cents an hour are the dregs of humanity....Although unemployment was high in Arkansas and Memphis and all claimants of unemployment insurance were offered cotton chopping jobs, few would take the work in the fields. Those who do go...are agricultural workers not covered by unemployment insurance." The New York Times, Sunday, July 16, 1961, p. 61.

28. W. S. Woytinsky and Associates, Employment and Wages in the United States, New York; The Twentieth Century Fund, 1953, p. 451. Also, C. D. Long, The Labor Force under Changing Income and Employment, Princeton University Press, 1958, p. 356.

from 40 to 60 percent less, depending on age. Much of the disparity, however, is due to differences in work. Where the task is the same, the margin is smaller, perhaps 10 to 20 percent.²⁹ The social minimum of women rests in some ways on firmer underpinnings than that of men. Statutory minimums are the same dollar amounts and are thus higher relative to lower market averages. Unemployment insurance is relatively more generous for the lower-wage female, because dollar maximums hold down the benefits of the higher-wage male. Some women feel less pressure to work because husbands and parents provide partial support; others feel less pressure because of freedom of responsibilities for dependents.

This being so, improvements in the minimum wage and in social insurance might be expected to cause average earnings to rise more for women than for men. Before 1950, there is evidence that female earnings rose more than male,³⁰ but recent data suggest otherwise. For example, in 17 large labor market areas, manufacturing wages rose the same between 1953 and 1959 for women office workers and industrial nurses as for men in skilled maintenance and unskilled plant work. The upward pressure of the social minimum might have compressed women's wages, by pushing up the lower earnings of women faster than the lower earnings of men, without boosting the average any faster; but there are no reliable data to establish this possibility.

Wages are notably lower for colored. For those employed full-time year-round, wage and salary earnings of colored men tend to be 35-40 percent less and colored females 35-45 percent less. On the other hand, negroes

29. 1959 Statistical Supplement, Monthly Labor Review, pp. 32-33. Recent data for twenty large labor market areas disclose that women accounting clerks average 14 percent less than men accounting clerks of the same grade, with a range of 5 to 30 percent less.

30. C. D. Long, loc. cit.

generally are younger, have less education and skill, and live in rural areas. Allowing for these differences, the social minimum for negroes may be higher relative to usual market wages than is true for whites. The Fair Labor Standards Act specifies the same flat statutory minimum for negroes, and the unemployment insurance system, the old age benefits system, and the various welfare systems, while they do not differentiate on the basis of color, give higher relative benefits to the lower-wage worker and thus provide firmer support to the social minimum for negroes. Similarly, as the welfare systems increase minimums and benefits faster than average wages, these could be expected to press upward on the social minimum of the negroes.

Developments of this level are difficult to quantify, for hourly wages are not given separately for negroes. Median annual wage and salary incomes of negroes rose from 41.3 percent of whites in 1939, to 58.8 percent in 1955, then declined to 52.5 percent in 1960. But the relative decline since 1955 was probably due to heavy negro unemployment. Full-time year-round workers show an increase in the percentage negro earnings were of white, from 63.5 percent in 1955 to 66.1 percent in 1960.³¹ However, the percentage fluctuates widely from one year to another, either because of statistical unreliability or because of variations in occupational and age composition. All things considered, we suspect that the social minimum may have gone up more for negroes than for whites, as a result of the greater impact of welfare programs for the negro, and we find the behavior of full-time wage and salary incomes consistent with this hypothesis, but our suspicion must await confirmation until separate hourly wage data become available.

31. Current Population Reports, Consumer Income, Series P-60, No. 23, p. 24; No. 36, p. 4.

The social minimum is surely lower in rural areas, where most of its underpinnings -- wage laws, unemployment insurance, welfare -- scarcely apply. How much lower is hard to say, because of the difference in occupations, industries, color, age and sex. Rural incomes of males 14 and older employed full-time the year-round rose from 37.5 percent of those of cities in 1955 to 43.1 percent in 1960. Fluctuations in this percentage add to the difficulty of establishing that the rural social minimum has been rising relatively -- though this might be expected on a priori grounds, as rural youths commute to higher paid city jobs, forcing farmers to pay wages closer to those of city industries.

Young people probably have a greater relative social minimum than the middle-aged, since the statutory minimum is the same, whereas market earnings of teenagers are much below, and those of youths 20-25 half to two-thirds, those of men in their middle years. Education itself bolsters the social minimum, because young people know their life-time earnings will be higher if they postpone working and continue in school. The social minimum is probably still higher, relative to market earnings, for older people. These can qualify for old age insurance, permanent disability insurance (which begins at age 50), old age assistance, private pensions. Frequently they have accumulated assets through savings which they can draw upon as an alternative to working. In addition, most older persons have shed their family responsibilities and many can even claim help from grown children if unemployed or prematurely retired.

5. Have Employment Declines Been Wage-Induced or Autonomous?

A case could be made that the lag of manual and blue-collar employment has been owing not to wage increases, but to autonomous changes in demand. Large employment declines took place in three industries which did not have spectacular wage increases -- textiles, mining, and automobiles (since 1955).

In these three, the 558,000 net shrinkage of production-worker employment between 1948 and 1959 was nearly four-fifths that in all manufacturing and mining. Wages rose more in transportation equipment than in all manufacturing, somewhat less in mining, and only about half as much in textiles.³² Among two-digit manufacturing industries during 1947-1958, Levinson could find no association between wage changes and production-worker employment. Cross-sectional correlations were insignificant, even when profits were held constant. Time series correlations were also insignificant.³³ Finally, the Department of Labor and others have analyzed the effects of elevating the minimum wage to 75 cents in 1950, or to \$1.00 in 1956, by comparing employment in certain low-wage industries just before, and just after, the increase.³⁴ A recent study of five industries -- cigars, fertilizer, lumber, men's and children's seamless hosiery, and wooden containers -- concluded that the employment declines were modest and indicated that employers attributed only a small part of them directly to the minimum.³⁵

32. These wage increases do not take account of the increases in fringe benefits. A small sample of firms surveyed by the U.S. Chamber of Commerce seemed to indicate that the percentage of wages paid in fringe benefits by textile and transportation equipment firms rose faster than the percentage paid by all manufacturing firms. Chamber of Commerce of the United States, Fringe Benefits, Washington 6, D.C., 1953, p. 19; 1955, p. 11; 1957, p. 17; 1959, p. 10.

33. Harold M. Levinson, "Postwar Movement of Prices and Wages in Manufacturing Industries," Study Paper No. 21, Joint Economic Committee, January 30, 1960, pp. 7, 21.

34. Paul A. Brinker, "The \$1 Minimum Wage Impact on 15 Oklahoma Industries," Monthly Labor Review, September 1957, pp. 1092-95; Norman J. Samuels, "Effects of the \$1 Minimum Wage in Seven Industries," Monthly Labor Review, March 1957, pp. 323-28, April 1957, pp. 441-46; "Effects of the \$1 Minimum Wage in Three Seasonal Industries," Monthly Labor Review, September 1957, pp. 1087-91; "Effects of the \$1 Minimum Wage: Men's and Boys' Shirt Industry," Monthly Labor Review, November 1957, pp. 1339-42; Louis E. Badenhop, "Effects of the \$1 Minimum Wage in Seven Areas," Monthly Labor Review, July 1958, pp. 737-43.

35. Norman J. Samuels, "Effects of the \$1 Minimum Wage in Five Industries," Monthly Labor Review, May 1958, pp. 492-501. The rise for wooden containers was 2.1 percent.

On the other hand, the effects of a minimum need not be realized, at once. Time may be required: to install machinery, shift production to other lines, send goods to low-wage areas for processing, or buy raw materials from abroad. Effects may also be indirect. Although reduction of employment often seems to stem from a shrinkage of product demand, shrinking product demand may be due to a rise in product price, traceable directly to a higher minimum, and indirectly to higher prices of materials whose costs have been raised by the minimum. A new machine or process to replace labor may grow out of a general climate of desire to eliminate the over-priced manual and blue-collar worker, without the employer seeing a close connection between this action and the new minimum.

Nevertheless, considerable support exists for a fairly direct and immediate connection. This support can best be found by analyzing the employment changes between peacetime-prosperity years -- not between a prosperity year such as 1947, and a recession year such as 1958, or between a war-time prosperity year such as 1953, and a peacetime-prosperity year such as 1956, because the pattern will be dominated by non-wage-induced changes in demand for labor. For these peacetime-prosperity comparisons, we have chosen the years 1948, 1955, and 1959.

The bulk of the 1948-1959 decline in manual and blue-collar employment actually occurred after 1955, when in fact, the annual decline in share of total labor force in manual occupations was 2-1/2 times as great as before 1955.³⁶ All of the 21 two-digit industries experienced a greater annual rate of employment decline, or a smaller rise, in the latter period. Concerning

36. Almost the entire decline has been among operatives and farm workers. The share of operatives fell 5 times as fast after 1955, of farmers half again as fast.

these changes, the following may be said.

First, in view of the concentration of the main employment declines between 1955 and 1959, it is interesting that they were associated with wage increases between the same years. Four industries -- furniture, electrical machinery, apparel, and printing -- whose employment expanded an average of 2 percent, had a median wage increase of 14 percent; thirteen whose employment shrank an average of 6 [between 1 and 14] percent had a median wage increase of 19 percent; and four (ordnance, primary metals, transportation equipment, and tobacco) whose employment was off 16 percent had median wage increases of 25 percent. The simple correlation between wage increases and employment declines was $-.34$, significant on the 95 percent level.

Second, a high correlation ($-.81$) exists among manufacturing industries, between the percentage which the effective minimum wage was of the average wage in 1954, and the employment decrease between 1954 and 1958 (the two dates for which an earnings distribution was available). The higher the effective minimum in 1954, the more employment fell during the subsequent four years.

Third, among manufacturing industries, a fair correlation ($-.34$) seems to exist between hourly earnings in 1959 and percentage changes between 1955 and 1959 in the ratio of production-worker to all employment. Non-production workers were presumably being substituted in those industries in which production-worker wages were especially high.

Fourth, among manufacturing industries with a high degree of concentration or unionization (excluding primary metals), percentage ⁱⁿ decreases of wages were correlated with percentage declines in production-worker employment per

unit of output.³⁷ The correlation was reasonably good for 1948-1959 (-.62), and for 1955-1959 (-.80), but was only borderline for 1948-1955. The one industry that offered an exception was primary metals, which had an especially large increase of wages and yet did not show much fall in employment per unit of output. However, the high capital requirements of the basic iron and steel industry make it difficult to substitute relatively much capital for labor in a few years.

As for industries with a low degree of concentration or unionization -- lumber, furniture, food, textiles, apparel, leather -- these show no significant wage-effects on employment; where wages and prices find a competitive level, wages are presumably as much the result as the cause.

Next, we have recent studies of wage effects on employment. In Michigan, Sobatka found that, for 16 out of 18 two-digit manufacturing industries, a higher wage was significantly associated with a greater decline in employment. The average significant elasticity was -1.6 and ranged from -0.5 to -3.8.³⁸ Transportation-equipment employment was particularly sensitive to wage variations. In a very recent cross-sectional analysis of two-digit manufacturing industries among states in each year 1954-1957, Minasian measured that part of the elasticity of demand for labor due to substitution of capital. Except for petroleum and coal products, he found higher wages significantly associated with lower employment, the significant elasticities varying between

37. The concentration ratios and estimated union strength in percent are given in Harold M. Levinson, "Postwar Movement of Prices and Wages in Manufacturing Industries," Study Paper No. 21, Joint Economic Committee, January 30, 1960, p. 7.

38. Stephen P. Sobatka, "Michigan's Employment Problem: The Substitution against Labor," Journal of Business, April 1961, pp. 119-125.

-.58 and -3.46, and remaining much the same from one year to another.³⁹

Finally, at least two recent analyses suggest that minimum wage increases have had greater adverse effects than earlier studies indicated.

Peterson examined the experience in Southern sawmills, men's cotton garments, and seamless hosiery during 1938-50 among plants grouped by region or wage levels, and among individual plants. He decided that employment changes are inversely related to wage increases imposed by a minimum, contrary to the prevailing view among labor economists that the minimums have had no significant employment effects.⁴⁰

Colberg studied the impact of the 1956 increase from \$.75 to a \$1 minimum on various counties of Florida. Employment in low-wage counties was more adversely affected by the change in the national minimum; for these counties the greater the induced increase in the average wage, the greater the employment decline. A one percent greater increase in the average wage was associated with a nearly 1 percent greater loss in man hours of employment.⁴¹

6. Do Men and Women Substitute for Each Other Economically?

Objection has been made that women could not have replaced men by virtue of better education and lower wages, because they are in non-competing groups; the men who leave are manual workers, the women who enter become office workers.

39. Jora R. Minasian, "Elasticities of Substitution and Constant-Output Demand Curves for Labor," Journal of Political Economy, June 1961, pp. 261-270.

40. John M. Peterson, "Employment Effects of Minimum Wages, 1938-1950," Journal of Political Economy, October 1957, pp. 412-430. "The data and methods of analysis in previous studies have not been adequate to isolate the effects of the minimums."

41. Marshall R. Colberg, "Minimum Wage Effects on Florida's Economic Development," Journal of Law and Economics, October 1960, pp. 112-117.

This objection supposes that, if the women had not entered the labor force, the office jobs would have stayed vacant, because the men displaced from manual jobs could not have filled them, however cheap their services.

Few occupations -- if any -- set physical or technical requirements so rigid that they can be held only by women. Clerical work, such as bookkeeping and typing, was once done largely by men. Physical and technical barriers may keep women from taking men's jobs, since women shrink from heavy or risky work; even so, every census reports women carpenters, mechanics, and craftsmen and, in 1959, one in every six laborers and one in every four factory operatives was a woman. Almost no occupations bar men purely because of sex, certainly not the clerical jobs women have come to dominate. As late as 1959, men filled 3 percent of typists jobs and nearly a third of all clerical and kindred jobs. If women increasingly monopolize offices, it is for economic rather than for technical reasons.⁴² That men released by the contracting manual occupations are not barred from the expanding clerical and service occupations because of their sex, is indicated by the fact that men are still entering them. In 1955, one in seven of the 2.1 million men who left operatives jobs, and one in six of the 1.6 million men who left laboring jobs, took professional, sales, clerical and (non-domestic) service positions.⁴³

Nor can it be argued that the female entrants had to take clerical jobs because they had nowhere else to go. Of the 3.2 million women already in the labor force who changed positions in 1955, only 27.5 percent went to clerical jobs; about half of the rest took up sales, service, and technical and

42. C. D. Long, op. cit., pp. 267-70.

43. Current Population Reports, "Job Mobility of Workers in 1955," Series P-50, No. 70, p. 20.

professional employments, and about 30 percent manual and laboring occupations.⁴⁴

7. Some Remaining Questions.

First, what role does aggregate demand play in creeping unemployment? Unemployment subsides to low levels during great inflations in aggregate demand. Because most of the social minimum is set by wage boards and other administrative action and by federal and state legislation, it cannot move up quickly, especially as state legislatures meet typically in regular session only every other year, and [its] measures to increase the social minimum are resisted by tax-paying groups. Even that part of the social minimum supported informally, by public opinion and employer conscience, may lag during demand inflation, by virtue of the money illusion. Thus, creeping unemployment is apt to occur when the expansion of aggregate demand, though perhaps allowing a moderate creep in prices, does not greatly dilute the real social minimum wage and thus prevent it from gaining on the revenue productivity of the lower segments of the labor force.

The statistical behavior of the social minimum is consistent with this hypothesis. When aggregate demand rose to new heights, during World War II and the Korean War, the various supports of the social minimum lagged and unemployment fell or stayed at low levels. Between World War II and the Korean War and, again, after the Korean conflict, these supports gained rapidly on aggregate demand, in terms both of average benefit and of coverage. The generosity of all the programs increased from the prosperity years 1947-48 to 1955-56, and again to 1959. Total sums paid out for all social welfare, excluding housing and education, rose as a percentage of disposable personal

⁴⁴. Op. cit., p. 20.

income from each prosperity period to the next⁴⁵ -- along with the percentage of prosperity unemployment.

Second, could it be labor immobility -- including a strong attachment to community and lack of money to move -- rather than lagging qualifications which keeps many manual workers from moving to the expanding clerical jobs? Certainly the unemployed -- especially the older ones -- are slow to move out of the mining areas and depressed textile towns. On the other hand, immobility is closely related to education and productivity, because poor education carries with it lack of information or choice where to go. Furthermore, high hourly wages, coupled with work sharing, enable coal miners to stay on so long as they can get one or two days work a week. Agricultural price supports serve as a social minimum, allowing low-income farmers to hold on in agriculture.

Third, isn't productivity really due to the job and the equipment rather than to the individual? Can't an individual of modest brains and education be nevertheless very productive on an auto assembly line? Isn't a barber necessarily limited in productivity because of the job he has, however distinguished his individual qualities?

The answer is that given adequate mobility of capital and labor, people tend to find jobs commensurate with their abilities. A Harvard Business School graduate will not ordinarily take a job in a barber shop, for his education, drive, and ability give him a wider choice. Where capital and managerial know-how permit high output from ordinary workers, the employer will want ordinary

45. Statistical Abstract of the United States, 1955, p. 244; 1958, p. 264; 1961, p. 260; Joint Economic Committee, Supplement to Economic Indicators, 1960, p. 14. The percentage was 7.1 in 1947-48, 7.7 in 1955-56, and 9.7 in 1959.

There would be some tendency for the rise of the prosperity unemployment to be a cause, rather than a result, of the increase in social welfare payments; but the increase of the latter was far too great to be attributed to the reverse effect.

workers -- workers with just the attainment called for, no more. The greater the competition and mobility, the more this will be true.

But suppose a union, say, of barbers, limits apprenticeship licenses and thus gains high wages for little ability? Unions can do this, of course, but they cannot insure that all workers get jobs. On the contrary, the very output restriction that creates high value productivity through scarcity reduces the number employed. Those displaced workers who will not offer their services in the non-union sector for what they will bring become part of creeping unemployment.

A closely associated question is, whether labor hasn't been displaced from the industries where productivity increases have been greatest, rather than from those where productivity has been lagging? True, some industries shrinking in demand and employment enjoy rapidly rising productivity. But the productivity increases are not caused by those disemployed, except insofar as the latter's high wages and [their] low personal productivity give the employer an incentive to install new methods and machinery to get them off the payroll. The productivity increases are due to management, capital, technology, and external economies. At the same time that industries give up manual and blue-collar workers, they take on technical and professional personnel for research and development and other staff functions, and clerical help for the expanding office work connected with automation. Employment has expanded most in technical and professional occupations where productivity cannot be measured, but nevertheless may be going ahead rapidly, as in the case of the medical profession, or education. In the case of education, its very expansion implies a recognition by the average parent and child that the greater productivity and earning power are well worth the taxes and tuition.

Fourth, why have negro employment and labor force rates fallen more

than white even though colored educational standards are probably moving up toward those of white? A possible explanation is that the colored social minimum may have risen more rapidly than the white as a result of the greater impact of the minimum wage and social insurance on low wage workers, who predominate among negroes. [See above, pp. 20-21.]

Fifth, why is unemployment lower in farming and rural areas, despite poorer rural education? The answer is that most farm workers are self-employed or unpaid family workers, for whom the concept of unemployment is poorly defined. Paid farm workers had unemployment rates in 1959 much higher than the average for the labor force as a whole and greater than the rates for craftsmen, operatives, or any other wage group except non-farm laborers.⁴⁶

Sixth, why hasn't creeping unemployment been observed before? Until 1940, the only unemployment statistics were the census enumerations for a month, or a day, every ten years. Estimates constructed by subtracting employment interpolations from labor force interpolations did not indicate an upward creep,⁴⁷ but were too crude to throw a clear light. Since 1940, sample surveys have provided fairly detailed monthly estimates, but during most of 1940-1953 demand inflation would have tended to keep creeping unemployment from appearing.

Furthermore, the social minimum wage could not have become a major factor until the 1930's when unionism was extended to mass production industries, when the New Deal put through national minimum wages, old age and unemployment insurance, public assistance, and work relief; and when government began to employ so many people that its relatively generous wages for lower echelon workers made an impact on the private sector.

46. Special Labor Force Report, No. 4, Monthly Labor Review, May 1960, p. A-36.

47. Stanley Lebergott, "Annual Estimates of Unemployment in the United States 1900-1950," Measurement and Behavior of Employment, Princeton University Press, 1957, p. 231.

Finally, why hasn't there been more creeping unemployment? The unemployed have lagged in average education; those who have lagged most have suffered the most unemployment; and the social minimum wage has been notable advances. Yet prosperity unemployment has in recent years been only 1-1/2 percent higher than in 1948. To be sure, unemployment has been held down by the withdrawal of many of the poorly-educated from the labor force; but this withdrawal raises a related question: Why hasn't the labor force declined, instead of staying about constant as a share of working-age population? The answer is that the drop-outs and stay-outs have been replaced with, even displaced by, the better-educated women.⁴⁸ Consistent with this replacement is the widening margin of educational superiority of the employed female, compared with the male not-in-labor-force that we noted, and the fact that it is only the better educated women who have entered the labor force, while the poorly educated women have left.

8. Concluding Remarks

Can we look for a continued upcreep of prosperity unemployment and labor force displacement in the future?⁴⁹ Whatever happens will, of course, depend on many developments at home and abroad -- including fiscal and monetary -- not considered in this paper. If those developments should be not too different from the events of the 1950's, the answer may well be, yes, for there

⁴⁸. The Labor Force under Changing Income and Employment, pp. 263-70.

⁴⁹. Not considered in the paper has been the possible effect on unemployment of the great growth of working age population of labor force in the 1960's. However, it has been argued in another paper that, historically, unemployment has been lowest in these decades of greatest working-age population and labor force growth. C. D. Long, "Labor Force and Unemployment in the 1960's." Proceedings of the Second 1961 Economic Institute, Chamber of Commerce of the United States, May 17, 1961, pp. 8-9.

is likely to be a continued broadening and strengthening of minimum wage and social insurance legislation.

To be sure, there may be some promise of a narrowing of the productivity spread. Federal aid will raise educational levels in rural areas. Negro education will probably advance closer to white standards. Lower barriers to negroes and older workers, and more job guidance should open up new employment opportunities.

On the other hand, these improvements and consolidations may merely alter the identity of the unemployed, rather than reduce their number. Always there may be some who lack the intelligence, motivation, personality, and stability to keep up with the parade.⁵⁰ Many who now hold jobs may be displaced if others presently at the bottom part of the productivity spread can move to higher levels. The innate diversity in the talents and personalities of human

50. Can the time come when there will be no room in a high industrial economy for muscle power without skill or training? A possible object lesson is the horse which represents almost pure muscle power and has virtually disappeared as a work animal on both city street and farm, almost completely displaced by car, truck, and tractor. Is the horse a case of absolute technological unemployment, one that does not even require a rising social minimum wage for its explanation, since horses labor for mere cost of subsistence?

It may be that the horse offers a fairly good analogy to the unskilled human worker. First, his physical productivity is difficult to increase except for some modest improvement in breeding, nutrition and training. Second, the horse has been the recipient of a rising social minimum wage gradually pricing his lagging qualifications out of the market. As human standards have risen, so have those of domestic animals, partly through greater humanity or pride on the part of owners, partly through insistence of Societies for the Prevention of Cruelty to Animals on adequate food and shelter, veterinary attention, relief from heavy loads. In addition, as the wages of humans rose, so increased the money cost of breeding, raising, and caring for work animals. Thus the work horse can be regarded as having a social minimum wage which kept pace to some extent with the average wage and productivity of human beings and in a generation or so priced his lagging qualifications almost completely out of the market. Such a fate for the unskilled human is at least conceivable, though the analogy should not perhaps be pushed too far.

beings may cause the productivity spread to continue to widen, despite all efforts to extend advantages to everyone.

A question arises as to whether the theory of creeping unemployment has validity only for industrial welfare societies? Certainly, underdeveloped countries are afflicted with heavy unemployment and underemployment. "It would not be an exaggeration to say that, if the experiment of planned development which India has embarked upon has brought out the need of more thinking and study on any subject, it is the problem of unemployment."⁵¹

And certainly, underdeveloped countries do have the phenomenon of the social minimum wage. "There is evident in each region [of India] a floor to the wage rate, below which it does not fall even when more labor is forthcoming than is demanded at that rate....The floor corresponds to what is commonly referred to as a subsistence wage...but it would be more accurate to describe it as the wage regarded as a technical minimum in a given social environment.... The resistance to cuts below this rate come from factors which are conventional as well as psychological...."⁵²

Such a social minimum might well creep upward, even though the underdeveloped economy stagnated, as a result of what economists have come to call the demonstration effect of rising living standards of developed countries. "It may affect the demand for social legislation and industrial labor standards as well as the desire for modern luxuries.... Practically all low-income countries today are to some degree affected by the attraction of the consumption problems of economically advanced countries...."⁵³ The demonstration

51. K. N. Raj, Employment Aspects of Planning in Underdeveloped Economies, Cairo, Egypt, 1957, pp. 2-3.

52. Op. cit., pp. 10-11.

53. Nurkse, Ragnar, Problems of Capital Formation in Underdeveloped Countries, New York, 1957, p. 65.

effect would have most of its impact on the urban areas.

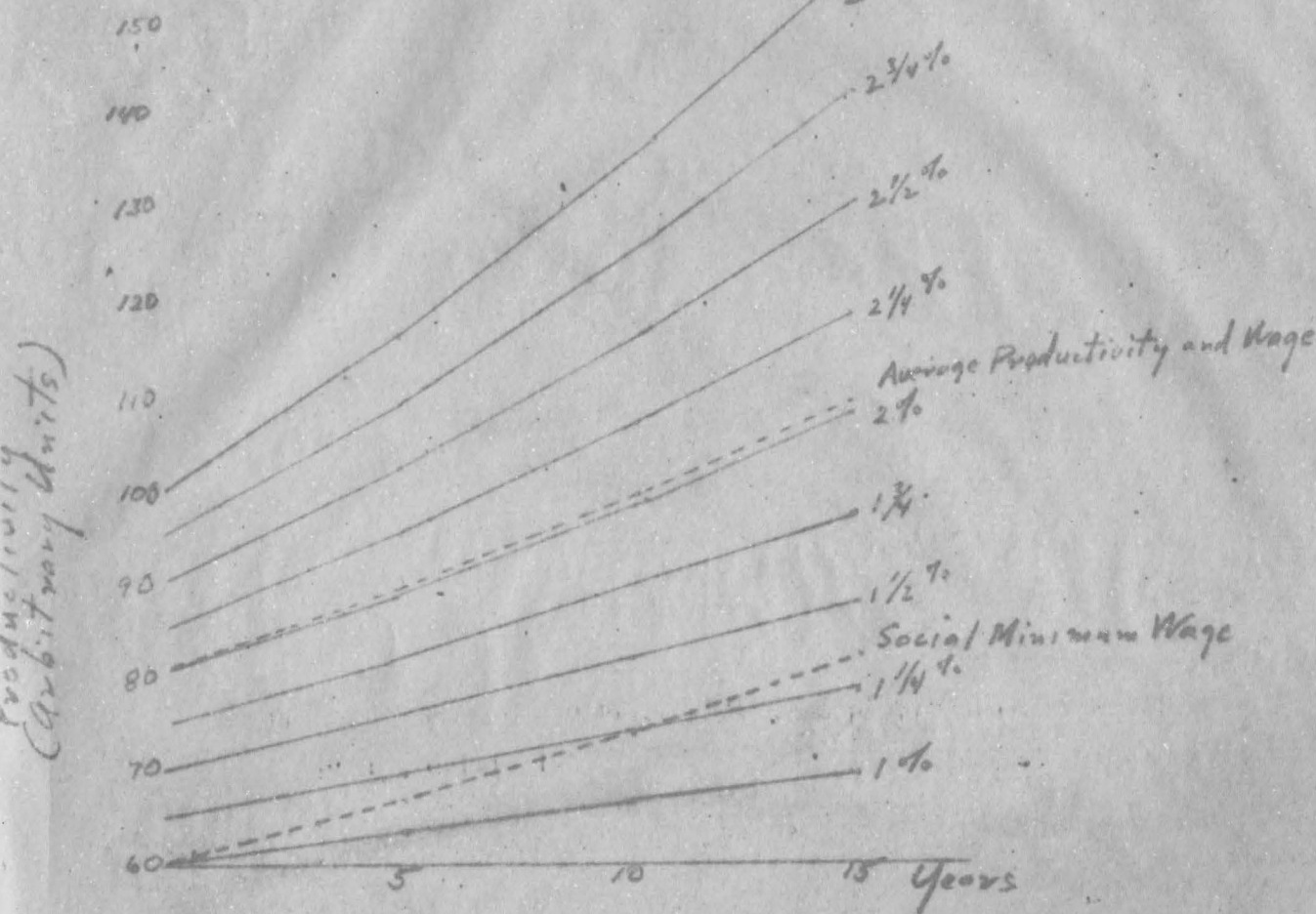
Thus, the basic requirements of the present theory of creeping unemployment may exist in static and underdeveloped countries, with the difference that the pace of the social minimum wage may be set by forces outside the underdeveloped country rather than within, as in the case of the advancing industrial societies. But all this is conjecture. Any application of the theory to other societies should not be made without thoroughgoing analysis and careful qualification.

Does this theory call for jettisoning the statutory minimum and curtailing social security and welfare benefits?

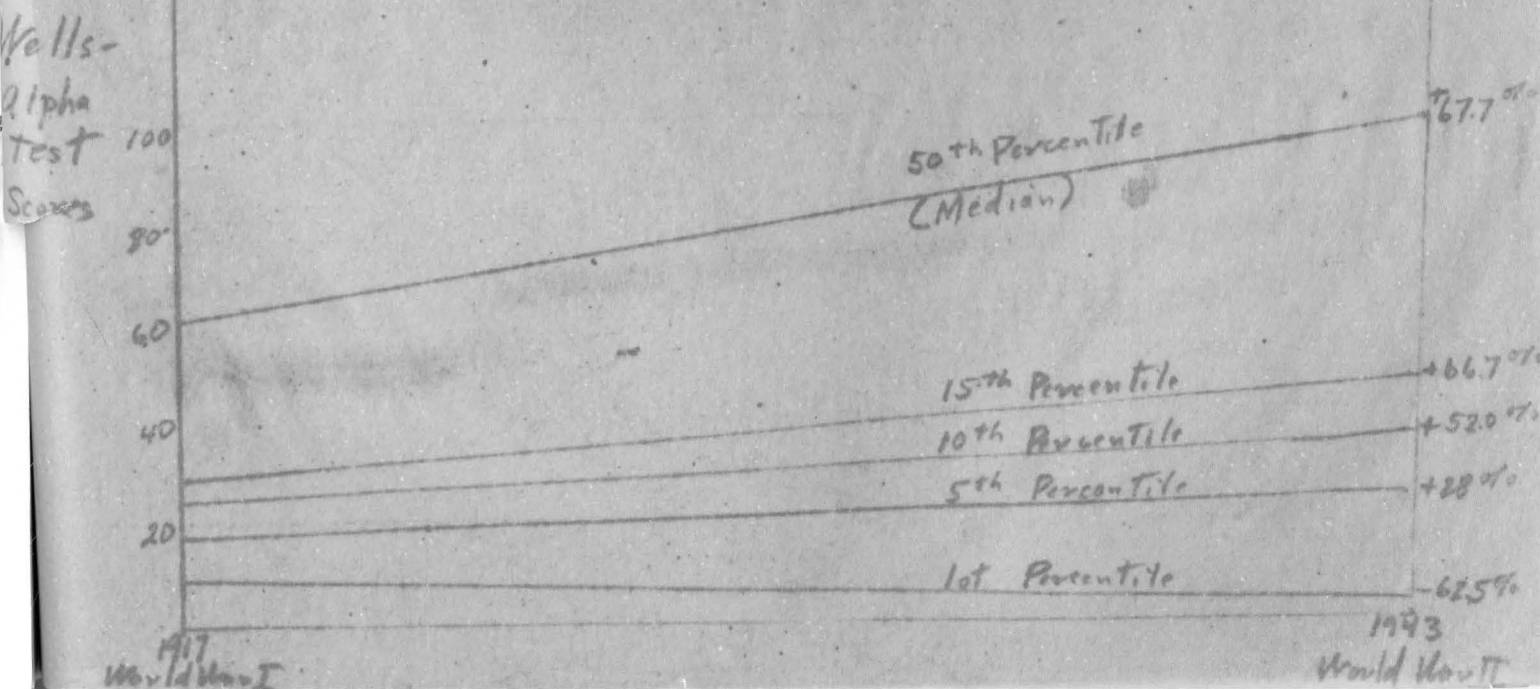
There are those who will prefer more evidence that creeping unemployment is caused by a social minimum wage in the face of a widening productivity spread than a short paper has been able to marshall. Others will perhaps accept this explanation of creeping unemployment but choose to retain a social minimum wage because of the protection it gives -- or tries to give! -- to the poor and unfortunate. On matters of policy, this paper gives no advice. Our theory of creeping unemployment and labor force displacement is just now exposed to the weather, and a theory should be well-seasoned before being used to fashion a plank in a political platform.

Chart 1 The Widening Spread of Productivity or Capacity

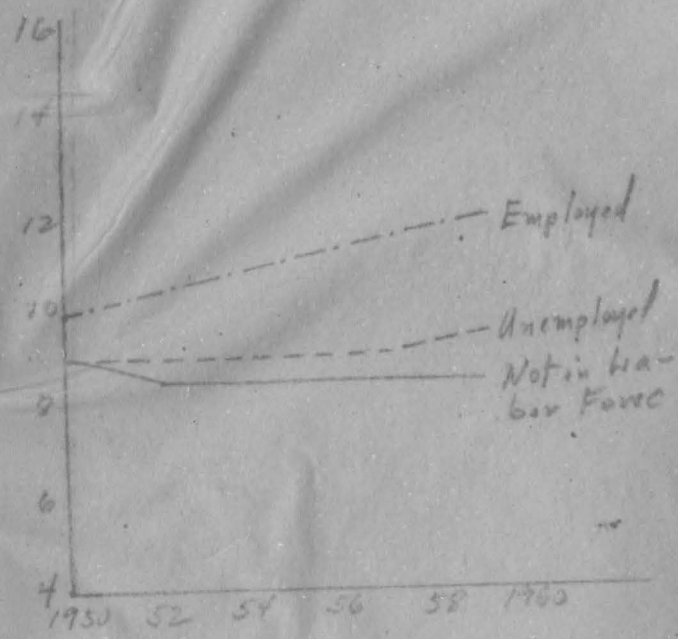
Section A: Theoretical Illustration of Widening Productivity Spread in Relation To Constant Wage Spread



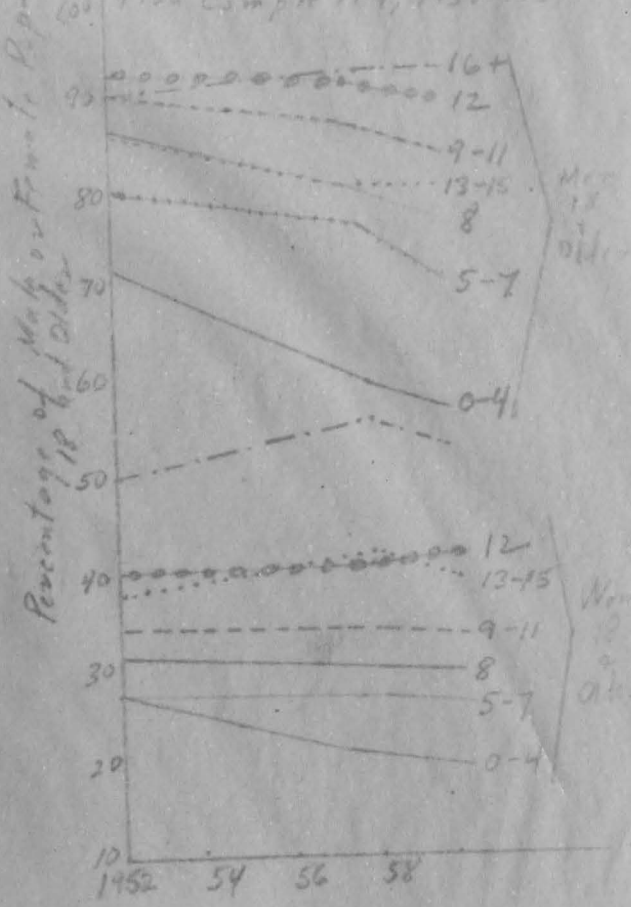
Section B Widening Distribution of Intelligence Scores, White Enlisted Men World Wars I and II



Section A Median Years of School Completed by Men 18 and Older by Employment Status, U.S. 1950-1959



Section B Percentage of Men and Women 18 and Older Employed, by Years of Education Completed, 1952-1959



Section C Percentages which Years of School Completed by Male Age Groups were of those Completed by Persons 14 and Older, United States 1950-1960, Projection to 1970.

